

**Project WET
Connections to KY
Core Content 4.1**

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Elementary

Mathematics

MA-EP-1.3.1

Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:

- add and subtract whole numbers with three digits or less;
- multiply whole numbers of 10 or less;
- add and subtract fractions with like denominators less than or equal to four and
- add and subtract decimals related to money.

DOK 2

MA-04-1.3.1

Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:

- add and subtract whole numbers with four digits or less;
- multiply whole numbers with two digits or less;
- divide whole numbers with three digits or less by single-digit divisors (with or without remainders);
- add and subtract fractions with like denominators less than or equal to 10 and
- add and subtract decimals through hundredths.

DOK 2

MA-05-1.3.1

Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:

- add, subtract, multiply, and divide whole numbers (less than 100,000,000), using technology where appropriate;
- add and subtract fractions with like denominators through 16, with sums less than or equal to one and
- add and subtract decimals through hundredths.

DOK 2

Reading

RD-EP-2.0.7

Students will make inferences or draw conclusions based on what is read.

DOK 3

RD-04-2.0.7

Students will make inferences or draw conclusions based on what is read.

DOK 3

RD-05-2.0.7

Students will make inferences or draw conclusions based on what is read.

DOK 3

Science

SC-EP-3.4.3

Students will describe the basic structures and related functions of plants and animals that contribute to growth, reproduction and survival.

Each plant or animal has observable structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare and describe organisms.

DOK 2

SC-05-3.5.1

Students will describe cause and effect relationships between enhanced survival/reproductive success and particular biological adaptations (e.g., changes in structures, behaviors, and/or physiology) to generalize about the diversity of populations of organisms.

Biological change over time accounts for the diversity of populations developed through gradual processes over many generations. Examining cause and effect relationships between enhanced survival/reproductive success and biological adaptations (e.g., changes in structures, behaviors, and/or physiology), based on evidence gathered, creates the basis for explaining diversity.

DOK 2

Social Studies

SS-EP-4.1.1

Students will use geographic tools (e.g., maps, globes, mental maps, charts, graphs) to locate and describe familiar places at home, school and the community

SS-04-4.1.1

Students will use geographic tools (e.g., maps, charts, graphs) to identify and describe natural resources and other physical characteristics (e.g., major landforms, major bodies of water, weather, climate, roads, bridges) in regions of Kentucky and the United States.

DOK 2

Middle School

Mathematics

MA-06-1.3.1

Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations to simplify numerical expressions.

DOK 2

MA-07-1.3.1

Students will add, subtract, multiply and divide whole numbers, fractions and decimals to solve real-world problems and apply order of operations (including positive whole number exponents) to simplify numerical expressions.

DOK 2

MA-08-1.3.1

Students will add, subtract, multiply and divide rational numbers to solve real-world problems and apply order of operations (including positive whole number exponents) to simplify numerical expressions.

DOK 2

Reading

RD-O6-2.0.7

Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.

DOK 3

RD-O7-2.0.7

Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.

DOK 3

RD-O8-2.0.7

Students will make predictions, draw conclusions, make generalizations or make inferences based on what is read.

DOK 3

RD-O6-2.0.8

Students will explain the meaning of concrete or abstract terms, based on the context from a passage (e.g., “loaded” words, connotation and denotation).
DOK 2

RD-O7-2.0.8

Students will explain the meaning of concrete and abstract terms, based on the context from a passage (e.g., “loaded” words, connotation and denotation).
DOK 2

RD-O8-2.0.8

Students will interpret the meaning of concrete and abstract terms, based on the context from a passage (e.g., “loaded” words, connotation and denotation).
DOK2

Science

SC-06-3.5.1

Students will explain that biological change over time accounts for the diversity of species developed through gradual processes over many generations.

Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.
DOK 2

SC-08-3.5.1

Students will draw conclusions and make inferences about the consequences of change over time that can account for the similarities among diverse species.

The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms.
DOK 3

Social Studies

SS-06-4.1.1

Students will use a variety of geographic tools (maps, photographs, charts, graphs, databases, satellite images) to interpret patterns and locations on Earth’s surface in the present day.
DOK 3

High School

Mathematics

MA-HS-1.3.1

Students will solve real-world and mathematical problems to specified accuracy levels by simplifying expressions with real numbers involving addition,

subtraction, multiplication, division, absolute value, integer exponents, roots (square, cube) and factorials.
DOK 2

Reading

RD-09-2.0.2

Students will identify essential information from a passage needed to accomplish a task

RD-10-2.0.2

Students will identify essential information from a passage needed to accomplish a task.

DOK 1

RD-11-2.0.2

Students will identify essential information from a passage needed to accomplish a task.

RD-12-2.0.2

Students will identify essential information from a passage needed to accomplish a task.

RD-09-2.0.3

Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.

RD-10-2.0.3

Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.

DOK 2

RD-11-2.0.3

Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage

RD-12-2.0.3

Students will apply the information contained in a passage to accomplish a task/procedure or to answer questions about a passage.

RD-09-2.0.7

Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.

RD-10-2.0.7

Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.

DOK 3

RD-11-2.0.7

Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.

RD-12-2.0.7

Students will make inferences, draw conclusions or make generalizations based on evidence from a passage.

Science

SC-HS-3.5.1

Students will:

- predict the impact on species of changes to 1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, or (4) natural selection;
- propose solutions to real-world problems of endangered and extinct species.

Species change over time. Biological change over time is the consequence of the interactions of (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life and (4) natural selection. The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms. Changes in DNA (mutations) occur spontaneously at low rates. Some of these changes make no difference to the organism, whereas others can change cells and organisms. Only mutations in germ cells have the potential to create the variation that changes an organism's future offspring.

DOK 3

SC-HS-3.5.2

Students will:

- predict the success of patterns of adaptive behaviors based on evidence/data;
- justify explanations of organism survival based on scientific understandings of behavior.

The broad patterns of behavior exhibited by organisms have changed over time through natural selection to ensure reproductive success. Organisms often live in unpredictable environments, so their behavioral responses must be flexible enough to deal with uncertainty and change. Behaviors often have an adaptive logic.

DOK 3

SC-HS-4.7.1

Students will:

- analyze relationships and interactions among organisms in ecosystems;
- predict the effects on other organisms of changes to one or more components of the ecosystem.

Organisms both cooperate and compete in ecosystems. Often changes in one component of an ecosystem will have effects on the entire system that are difficult to predict. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.

DOK 3

Social Studies

SS-HS-4.1.1

Students will use a variety of geographic tools (e.g., maps, globes, photographs, models, satellite images, charts, graphs, databases) to explain and analyze the reasons for the distribution of physical and human features on Earth's surface.

DOK 3